

# **DATA SHEET**

# **GENERAL PURPOSE CHIP RESISTORS**

RC\_L series

±0.1%, ±0.5%, ±1%, ±5% Sizes 0075/0100/0201/0402/0603/0805/ 1206/1210/1218/2010/2512

RoHS compliant & Halogen free







#### SCOPE

This specification describes RC series chip resistors with lead free terminations made by thick film process.

#### **APPLICATIONS**

• All general purpose application

#### **FEATURES**

- Halogen Free Epoxy
- RoHS compliant
  - Products with lead free terminations meet RoHS requirements
  - Pb-glass contained in electrodes, resistors element and glass are exempted by RoHS
- Reducing environmentally hazardous wastes
- High component and equipment reliability
- Saving of PCB space
- None forbidden-materials used in products/production
- MSL class: MSL I

#### ORDERING INFORMATION - GLOBAL PART NUMBER

Global part numbers are identified by the series, size, tolerance, packing type, temperature coefficient, taping reel and resistance value.

#### **GLOBAL PART NUMBER**

#### RC XXXX X X X XX XXXX L

(1) (2) (3) (4) (5)

6) (

#### (I) SIZE

0075/0100/0201/0402/0603/0805/1206/1210/1218/2010/2512

#### (2) TOLERANCE

 $B = \pm 0.1\%$ 

 $D = \pm 0.5\%$ 

 $F = \pm 1.0\%$ 

 $J = \pm 5.0\%$  (for jumper ordering, use code of J)

#### (3) PACKAGING TYPE

R = Paper taping reel

K = Embossed taping reel

S = ESD safe reel (0075/0100 only)

#### (4) TEMPERATURE COEFFICIENT OF RESISTANCE

- = Based on spec.

#### (5) TAPING REEL & POWER

07 = 7 inch dia. Reel & Standard power

10 = 10 inch dia. Reel

13 = 13 inch dia, Reel

7W = 7 inch dia. Reel & 2 x standard power

7N = 7 inch dia. Reel, ESD safe reel (0075/0100 only)

3W = 13 inch dia. Reel & 2 x standard power

#### (6) RESISTANCE VALUE

There are 2~4 digits indicated the resistance value.

Letter R/K/M is decimal point

Example:

 $97R6 = 97.6\Omega$ 

 $9K76 = 9760\Omega$ 

 $1M = 1,000,000\Omega$ 

#### (7) DEFAULT CODE

Letter L is the system default code for ordering only. (Note)

#### **ORDERING EXAMPLE**

The ordering code for a RC0402 0.0625W chip resistor value  $100 \text{K}\Omega$  with  $\pm$  5% tolerance, supplied in 7-inch tape reel of 10,000 units per reel is: RC0402JR-07100KL.

#### NOTE

- 1. All our RSMD products meet RoHS compliant and Halogen Free. "LFP" of the internal 2D reel label mentions "Lead Free Process".
- 2. On customized label, "LFP" or specific symbol can be printed.



SERIES

0075 to 2512

#### **MARKING**

#### RC0075 / RC0100 / RC0201 / RC0402



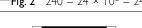
No Marking

....Fig. I

#### RC0603

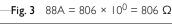


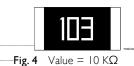
1%, 0.5%,E24 exception values 10/11/13/15/20/75 of E24 series





1%, 0.5%, E96 refer to EIA-96 marking method, including values 10/11/13/15/20/75 of E24 series





5%, E24 series: 3 digits

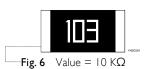
First two digits for significant figure and 3rd digit for number of zeros

#### RC0805 / RC1206 / RC1210 / RC2010 / RC2512



1%, 0.5%, E24/E96 series: 4 digits

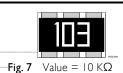
First three digits for significant figure and 4th digit for number of zeros



5%, E24 series: 3 digits

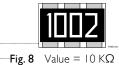
First two digits for significant figure and 3rd digit for number of zeros

#### RC1218



E-24 series: 3 digits, ±5%

First two digits for significant figure and 3rd digit for number of zeros



Both E-24 and E-96 series: 4 digits, ±1% & ±0.5%

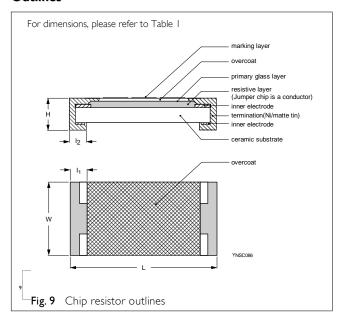
First three digits for significant figure and 4th digit for number of zeros

For further marking information, please see special data sheet "Chip resistors marking".

#### **CONSTRUCTION**

The resistor is constructed on top of a high-grade ceramic body. Internal metal electrodes are added on each end to make the contacts to the thick film resistive element. The composition of the resistive element is a noble metal imbedded into a glass and covered by a second glass to prevent environmental influences. The resistor is laser trimmed to the rated resistance value. The resistor is covered with a protective epoxy coat, finally the two external terminations (matte tin on Ni-barrier) are added, as shown in Fig. 9.

#### **Outlines**



#### **DIMENSION**

Table I

TYPE	L (mm)	W (mm)	H (mm)	I <sub>I</sub> (mm)	l <sub>2</sub> (mm)
RC0075	0.30±0.01	0.15±0.01	0.13±0.01	0.08±0.03	0.08±0.03
RC0100	0.40±0.02	0.20±0.02	0.13±0.02	0.10±0.03	0.10±0.03
RC0201	0.60±0.03	0.30±0.03	0.23±0.03	0.10±0.05	0.15±0.05
RC0402	1.00±0.05	0.50±0.05	0.35±0.05	0.20±0.10	0.25±0.10
RC0603	1.60±0.10	0.80±0.10	0.45±0.10	0.25±0.15	0.25±0.15
RC0805	2.00±0.10	1.25±0.10	0.50±0.10	0.35±0.20	0.35±0.20
RC1206	3.10±0.10	1.60±0.10	0.55±0.10	0.45±0.20	0.45±0.20
RC1210	3.10±0.10	2.60±0.15	0.55±0.10	0.45±0.15	0.50±0.20
RC1218	3.10±0.10	4.60±0.10	0.55±0.10	0.45±0.20	0.40±0.20
RC2010	5.00±0.10	2.50±0.15	0.55±0.10	0.60±0.20	0.55±0.20
RC2512	6.35±0.10	3.10±0.15	0.55±0.10	0.60±0.20	0.60±0.20

#### **ELECTRICAL CHARACTERISTICS**

Table 2

CHARAC- TERISTICS	POWER	OPERATING TEMPERATURE RANGE	MAXIMUM WORKING VOLTAGE	MAXIMUM OVERLOAD VOLTAGE	DIELECTRIC WITHSTANDING VOLTAGE	resistance range	TEMPERATURE COEFFICIENT	JUMPER CRITERIA
RC0075	1/50 W	-55°C to  25°C	10V	25V	25V	$\begin{array}{c} 5\% \text{ (E24)} \\ 10\Omega \leqq R \leqq \text{ IM}\Omega \\ \text{I \% (E24/E96)} \\ 10\Omega \leqq R \leqq \text{ IM}\Omega \\ \text{Jumper} < 50\text{m}\Omega \end{array}$	10Ω≦R<100Ω -200~+600ppm°C 100Ω≦R≤IMΩ ±200ppm°C	Rated Current 0.5A Maximum Current 1.0A
RC0100	1/32 W	-55°C to l25°C	15V	30V	30V	$\begin{array}{c} 5\% \ (\text{E24}) \\ \text{I} \Omega \leqq \text{R} \leqq 22\text{M}\Omega \\ \text{I} \% \ (\text{E24/E96}) \\ \text{I} \Omega \leqq \text{R} \leqq \text{I} \text{OM}\Omega \\ \text{0.5}\% \ (\text{E24/E96}) \\ 33\Omega \leqq \text{R} \leqq 470\text{K}\Omega \\ \text{Jumper} < 50\text{m}\Omega \end{array}$	$\begin{split} & \Gamma\Omega \leqq R < 10\Omega \\ -200 \sim +600 ppm ^{\circ}C \\ & 10\Omega \leqq R < 100\Omega \\ & \pm 300 ppm ^{\circ}C \\ & 100\Omega \leqq R \le 10M\Omega \\ & \pm 200 ppm ^{\circ}C \\ & 10M\Omega < R \le \\ & 22M\Omega \\ & \pm 250 ppm ^{\circ}C \\ \end{split}$	Rated Current 0.5A Maximum Current 1.0A



Product specification

ci specification 3

Table 2

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CHARAC- TERISTICS	POWER	OPERATING TEMPERATURE RANGE	MAXIMUM WORKING VOLTAGE	MAXIMUM OVERLOAD VOLTAGE	DIELECTRIC WITHSTANDING VOLTAGE	resistance range	TEMPERATURE COEFFICIENT	JUMPER CRITERIA
RC0201	1/20 W	-55°C to l25°C	25V	50V	50V	$\begin{array}{c} 5\% \text{ (E24)} \\ I\Omega \leqq R \leqq I0M\Omega \\ I\% \text{ (E24/E96)} \\ I\Omega \leqq R \leqq I0M\Omega \\ 0.5\% \text{ (E24/E96)} \\ I\Omega \leqq R \leqq IM\Omega \\ 0.1\% \text{ (E24/E96)} \\ I0\Omega \leqq R \leqq IM\Omega \\ Jumper < 50m\Omega \\ \end{array}$	$\begin{array}{c} I\Omega \leqq R \leqq I0\Omega \\ -100 \sim +350 ppm \\ ^{\circ}C \\ I0\Omega < R \leqq I0M\Omega \\ \pm 200 ppm ^{\circ}C \end{array}$	Rated Current 0.5A Maximum Current 1.0A
RC0402	1/16 W	-55°C to l55°C	50V	100V	100V	$\begin{array}{c} 5\% \text{ (E24)} \\ \text{I}\Omega \leqq R \leqq 22M\Omega \\ \text{I}\% \text{ (E24/E96)} \\ \text{I}\Omega \leqq R \leqq \text{I}0M\Omega \\ \text{0.5}\% \text{ (E24/E96)} \\ \text{I}\Omega \leqq R \leqq \text{I}M\Omega \\ \text{0.1}\% \text{ (E24/E96)} \\ \text{I}\Omega \leqq R \leqq \text{I}M\Omega \\ \text{J}\text{Umper} < 50m\Omega \\ \end{array}$	$\begin{split} & \hspace{0.1cm} 0.1c$	Rated Current I.OA Maximum Current 2.0A
	1/8W	-55°C to 155°C	50V	100V	100V	$\begin{array}{c} 5\% \text{ (E24)} \\ \text{I } \Omega \leqq \text{R} \leqq \text{I M} \Omega \\ \text{I \% (E24/E96)} \\ \text{I } \Omega \leqq \text{R} \leqq \text{I M} \Omega \end{array}$	IΩ≦R≦IMΩ ±200ppm°C	
RC0603	1/10 W	-55°C to 155°C	75V	150V	150V	$5\%$ (E24) $1\Omega \le R \le 22M\Omega$ $1\%$ (E24/E96) $1\Omega \le R \le 10M\Omega$ $0.5\%$ (E24/E96) $1\Omega \le R \le 1M\Omega$ $0.1\%$ (E24/E96) $10\Omega \le R \le 1M\Omega$ Jumper<50mΩ	$\begin{split} & \hspace{0.1cm} 0.1c$	Rated Current I.0A Maximum Current 2.0A
	1/5 W	-55℃ to I55℃	75V	150V	150V	$\begin{array}{c} 5\% \text{ (E24)} \\ \text{I } \Omega \leqq \text{R} \leqq \text{I M} \Omega \\ \text{I \% (E24/E96)} \\ \text{I } \Omega \leqq \text{R} \leqq \text{I M} \Omega \end{array}$	IΩ≦R≦IMΩ ±200ppm°C	
RC0805	1/8 W	-55°C to 155°C	150V	300V	300V	$\begin{array}{c} 5\% \ (\text{E24}) \\ 1\Omega \leqq R \leqq 100\text{M}\Omega \\ 1\% \ (\text{E24/E96}) \\ 1\Omega \leqq R \leqq 10\text{M}\Omega \\ 0.5\% \ (\text{E24/E96}) \\ 1\Omega \leqq R \leqq 1\text{M}\Omega \\ 0.1\% \ (\text{E24/E96}) \\ 10\Omega \leqq R \leqq 1\text{M}\Omega \\ 10\%, 20\% \ (\text{E24}) \\ 24\text{M}\Omega \leqq R \leqq 100\text{M}\Omega \\ \text{Jumper} < 50\text{m}\Omega \end{array}$	$\begin{split} & \hspace{0.1cm} 0.1c$	Rated Current 2.0A Maximum Current 5.0A
	1/4 W	-55℃ to I55℃	150V	300V	300V	$\begin{array}{c} 5\% \text{ (E24)} \\ \text{I}\Omega \leqq \text{R} \leqq \text{I} \text{M}\Omega \\ \text{I}\% \text{ (E24/E96)} \\ \text{I}\Omega \leqq \text{R} \leqq \text{I} \text{M}\Omega \end{array}$	IΩ≦R≦IMΩ ±200ppm°C	



Chip Resistor Surface Mount RC\_L SERIES 0075 to 2512

## FOOTPRINT AND SOLDERING PROFILES

For recommended footprint and soldering profiles, please refer to data sheet "Chip resistors mounting"

Table	3
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CHARAC- TERISTICS	POWER	OPERATING TEMPERATURE RANGE	MAXIMUM WORKING VOLTAGE	MAXIMUM OVERLOAD V VOLTAGE	DIELECTRIC WITHSTANDING VOLTAGE	resistance range	TEMPERATURE COEFFICIENT	JUMPER CRITERIA
RC1206	1/4 W	-55°C to l55°C	200V	400V	500V	$\begin{array}{c} 5\% \ (\text{E24}) \\ \text{I} \ \Omega \leq \text{R} \leq \text{I} \ \text{I} \ \text{OM} \ \Omega \\ \text{I} \ \% \ (\text{E24}/\text{E96}) \\ \text{I} \ \Omega \leq \text{R} \leq \text{I} \ \text{I} \ \text{OM} \ \Omega \\ \text{0.5\%} \ (\text{E24}/\text{E96}) \\ \text{I} \ \Omega \leq \text{R} \leq \text{I} \ \text{M} \ \Omega \\ \text{0.1\%} \ (\text{E24}/\text{E96}) \\ \text{I} \ \Omega \Omega \leq \text{R} \leq \text{I} \ \text{M} \ \Omega \\ \text{I} \ 0\%, 20\% \ (\text{E24}) \\ \text{24M} \ \Omega \leq \text{R} \leq \text{I} \ \text{OM} \ \Omega \\ \text{Jumper} < 50 \text{m} \ \Omega \end{array}$	$\begin{split} & \hspace{0.1cm} 0.1c$	Rated Current 2.0A Maximum Current 10.0A
	1/2 W	-55℃ to 155℃	200V	400V	500V	$\begin{array}{c} 5\% \text{ (E24)} \\ \text{I} \Omega \leqq \text{R} \leqq \text{IM}\Omega \\ \text{I} \% \text{ (E24/E96)} \\ \text{I} \Omega \leqq \text{R} \leqq \text{IM}\Omega \end{array}$	$1\Omega \le R \le IM\Omega$ $\pm 200 ppm^{\circ}C$	
RC1210	1/2 W	-55°C to I55°C	200V	500V	500V	$\begin{array}{c} 5\% \text{ (E24)} \\ \text{I}\Omega \leqq R \leqq 22M\Omega \\ \text{I}\% \text{ (E24/E96)} \\ \text{I}\Omega \leqq R \leqq \text{ I}0M\Omega \\ \text{0.1\%, 0.5\% (E24/E96)} \\ \text{I}0\Omega \leqq R \leqq \text{I}M\Omega \\ \text{Jumper} < 50m\Omega \end{array}$	$\begin{array}{c} I\Omega \leqq R \leqq I0\Omega \\ \pm 200 \mathrm{ppm}^{\circ}\mathrm{C} \\ I0\Omega < R \leqq I0 \mathrm{M}\Omega \\ \pm 100 \mathrm{ppm}^{\circ}\mathrm{C} \\ I0 \mathrm{M}\Omega < R \leqq 22 \mathrm{M}\Omega \\ \pm 200 \mathrm{ppm}^{\circ}\mathrm{C} \end{array}$	Rated Current 2.0A Maximum Current 10.0A
RC1218	ΙW	-55°C to 155°C	200V	500V	500V	$5\% \text{ (E24)}$ $I\Omega \leqq R \leqq IM\Omega$ $I\% \text{ (E24/E96)}$ $I\Omega \leqq R \leqq IM\Omega$ $0.1\%, 0.5\% \text{ (E24/E96)}$ $I0\Omega \leqq R \leqq IM\Omega$ $\text{Jumper} < 50\text{m}\Omega$	$I\Omega \le R \le I0\Omega$ $\pm 200 ppm^{\circ}C$ $I0\Omega < R \le IM\Omega$ $\pm I00 ppm^{\circ}C$	Rated Current 6.0A Maximum Current 10.0A
RC2010	3/4 W	-55°C to I55°C	200V	500V	500V	$5\%$ (E24) $1\Omega \le R \le 22M\Omega$ $1\%$ (E24/E96) $1\Omega \le R \le 10M\Omega$ 0.1%, 0.5% (E24/E96) $10\Omega \le R \le 1M\Omega$ Jumper<50mΩ	$\begin{split} I\Omega &\leqq R \leqq I0\Omega \\ &\pm 200 ppm^{\circ}C \\ I0\Omega &< R \leqq I0M\Omega \\ &\pm I00 ppm^{\circ}C \\ I0M\Omega &< R \leqq 22M\Omega \\ &\pm 200 ppm^{\circ}C \end{split}$	Rated Current 2.0A Maximum Current 10.0A
RC2512	IW	-55°C to I55°C	200V	500V	500V	$5\%$ (E24) $I\Omega \le R \le 22M\Omega$ $I\%$ (E24/E96) $I\Omega \le R \le I0M\Omega$ 0.1%, 0.5% (E24/E96) $I0\Omega \le R \le IM\Omega$ Jumper<50mΩ	$\begin{split} & \hspace{0.1cm} 0.1c$	Rated Current 2.0A Maximum Current 10.0A
	2 W	-55℃ to 155℃	200V	400V	500V	$5\% \text{ (E24)}$ $1\Omega \leqq R \leqq 1M\Omega$ $1\% \text{ (E24/E96)}$ $1\Omega \leqq R \leqq 1M\Omega$	IΩ≦R≦IMΩ ±200ppm°C	





#### **Chip Resistor Surface Moun**

#### PACKING STYLE AND PACKAGING QUANTITY

Table 4 Packing style and packaging quantity

PACKING STYLE	PAPER TAPING REEL (R)			ESD SAFE REEL (S) (4MM WIDTH, IMM PITCH PLASTIC EMBOSSED)	EMBOSSED TA	APING REEL
REEL DIMENSION	7" (178 mm)	10" (254mm)	13" (330 mm)	7" (178 mm)	7" (178 mm)	13" (330 mm)
RC0075				20000		
RC0100	20000		80000	40000		
RC0201	10000	20000	50000			
RC0402	10000	20000	50000			
RC0603	5000	10000	20000			
RC0805	5000	10000	20000			
RC1206	5000	10000	20000			
RC1210	5000	10000	20000			
RC1218					4000	
RC2010					4000	16000
RC2512					4000	

RC\_L

SERIES

For tape and reel specification/dimensions, please refer to data sheet "Chip resistors packing".

#### **FUNCTIONAL DESCRIPTION**

#### **OPERATING TEMPERATURE RANGE**

RC0402 to RC2512 Range: -55°C to +155°C (Fig. 10-1) RC0075 to RC0201 Range: -55°C to +125°C (Fig. 10-2)

#### **POWER RATING**

Each type rated power at 70°C:

RC0075=1/50W

RC0100=1/32W

RC0201=1/20W

RC0402=1/16W, 1/8W

RC0603=1/10W, 1/5W

RC0805=1/8W, 1/4W

RC1206=1/4W, 1/2W

RC1210=1/2W

RC1218=1W

RC2010=3/4W

RC2512=1W, 2W

#### **RATED VOLTAGE**

The DC or AC (rms) continuous working voltage corresponding to the rated power is determined by the following formula:

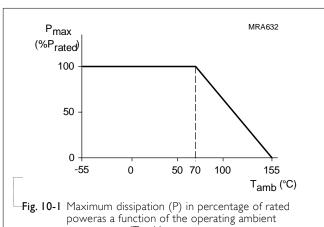
$$V = \sqrt{(PxR)}$$

or max. working voltage whichever is less

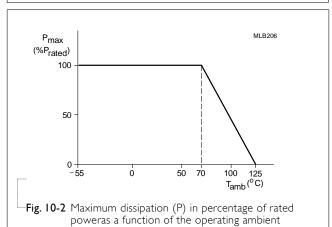
V = Continuous rated DC or AC (rms) working voltage (V)

P = Rated power (W)

 $R = Resistance value (\Omega)$ 



. temperature (Tamb)



temperature (Tamb)



SERIES 0075 to 2512

## TESTS AND REQUIREMENTS

Table 5 Test condition, procedure and requirements

TEST	TEST METHOD	PROCEDURE	REQUIREMENTS
Temperature Coefficient of	MIL-STD-202 Method 304	At +25/–55°C and +25/+125°C	Refer to table 2
Resistance		Formula:	
(T.C.R.)		T.C.R= $\frac{R_2 - R_1}{R_1(t_2 - t_1)} \times 10^6 \text{ (ppm/°C)}$	
		Where	
		$t_1$ =+25 °C or specified room temperature	
		$t_2$ =–55 °C or +125 °C test temperature	
		R <sub>1</sub> =resistance at reference temperature in ohms	
		R <sub>2</sub> =resistance at test temperature in ohms	
Life/ Endurance	MIL-STD-202 Method 108 IEC 60115-1 7.1	At 70±2°C for 1,000 hours; RCWV applied for 1.5 hours on and 0.5 hour off, still air required	$0075$ : $\pm$ (5%+100m $\Omega$ ) $<$ 100m $\Omega$ for jumper $01005$ : $\pm$ (3% +50m $\Omega$ ) $<$ 100m $\Omega$ for jumper Others:
			$\pm$ (1%+50m $\Omega$ ) for B/D/F tol
			$\pm (3\% + 50 \text{m}\Omega)$ for J tol
			<100mR for jumper
High Temperature Exposure	MIL-STD-202 Method 108	I,000 hours at maximum operating temperature depending on specification, unpowered.	0075: $\pm$ (5%+100m $\Omega$ ) <100m $\Omega$ for jumper 01005: $\pm$ (1% +50m $\Omega$ ) < 50m $\Omega$ for jumper
			Others:
			$\pm (1\% + 50 \text{m}\Omega)$ for B/D/F tol
			$\pm (2\% + 50 m\Omega)$ for J tol
			<50mR for jumper
Moisture Resistance	MIL-STD-202 Method 106	Each temperature / humidity cycle is defined at 8 hours, 3 cycles / 24 hours for	0075: $\pm$ (2%+100mΩ) <100mΩ for jumper 01005: $\pm$ (2% +50mΩ)
		10d with 25°C / 65°C 95% R.H, without steps	$< 100 \text{m}\Omega$ for jumper
		7a & 7b, unpowered	Others:
		Parts mounted on test-boards, without	$\pm (0.5\% + 50 m\Omega)$ for B/ D/F tol
		condensation on parts	$\pm (2\% + 50 m\Omega)$ for J tol
			<100mR for jumper
Humidity	IEC 60115-1 10.4	Steady state for 1000 hours at 40°C / 95% R.H. RCWV applied for 1.5 hours on and 0.5 hour off	0075: $\pm$ (5%+100mΩ) 01005: $\pm$ (3% +50mΩ) < 100mΩ for jumper Others:
			$\pm$ (1%+50m $\Omega$ ) for B/D/F tol
			$\pm (2\% + 50 \text{m}\Omega)$ for J tol
			I(Z/0TJUH <b>SZ</b> ) 101 1 101



Chip Resistor Surface Mount RC\_L SERIES 0075 to 2512

TEST	TEST METHOD	PROCEDURE	REQUIREMENTS
Thermal Shock	MIL-STD-202 Method 107	-55/+125°C  Note Number of cycles required is 300.  Devices mounted  Maximum transfer time is 20 seconds.  Dwell time is 15 minutes. Air - Air	0075/01005: $\pm$ (1% +50m $\Omega$ ) < 50m $\Omega$ for jumper Others: $\pm$ (0.5%+50m $\Omega$ ) for B/D/F tol $\pm$ (1%+50m $\Omega$ ) for J tol < 50mR for jumper
Short Time Overload	IEC 60115-1 8.1	2.5 times RCWV or maximum overload voltage which is less for 5 seconds at room temperature	$0075/01005: \pm (2\% + 50 \text{m}\Omega) \\ < 50 \text{m}\Omega \text{ for jumper} \\ \text{Others:} \\ \pm (1\% + 50 \text{m}\Omega) \text{ for B/D/F tol} \\ \pm (2\% + 50 \text{m}\Omega) \text{ for J tol} \\ < 50 \text{mR for jumper} \\ \text{No visible damage}$
Board Flex/ Bending	IEC 60115-1 9.8	Device mounted or as described only I board bending required bending time: 60±5 seconds 0075/0100/0201/0402:5mm; 0603/0805:3mm; I 206 and above:2mm	0075/01005: $\pm$ (1% +50m $\Omega$ ) < 50m $\Omega$ for jumper Others: $\pm$ (1%+50m $\Omega$ ) for B/D/F/J tol <50mR for jumper No visible damage
Solderability - Wetting	J-STD-002 test BI	Electrical Test not required Magnification 50X SMD conditions:  Ist step: aging 4 hours at 155°C dry heat  2nd step: method BI, leadfree solder bath at 245±3°C  Dipping time: 3± 0.5 seconds	Well tinned (>95% covered) No visible damage
-Leaching	J-STD-002 test D	Leadfree solder ,260°C, 30 seconds immersion time	No visible damage
-Resistance to Soldering Heat	MIL-STD-202 Method 210	Condition B, no pre-heat of samples Leadfree solder, 260°C ±5°C, 10 ±1 seconds immersion time Procedure 2 for SMD: devices fluxed and cleaned with isopropanol	$0075: \pm (3\% + 50 \text{m}\Omega)$ <50 m \Omega for jumper $01005: \pm (1\% + 50 \text{m}\Omega)$ < 50 m \Omega for jumper $01065: \pm (0.5\% + 50 \text{m}\Omega) \text{ for B/D/F tol.}$ $\pm (1\% + 50 \text{m}\Omega) \text{ for J tol.}$ <50 m R for jumper $0075: \pm (1\% + 50 \text{m}\Omega) \text{ for J tol.}$ <50 m R for jumper $0075: \pm (1\% + 50 \text{m}\Omega) \text{ for J sol.}$ <50 m R for jumper $0075: \pm (1\% + 50 \text{m}\Omega) \text{ for J sol.}$

# Chip Resistor Surface Mount RC\_L SERIES 0075 to 2512

**REVISION HISTORY** 

REVISION	DATE	CHANGE NOTIFICATION	DESCRIPTION
Version 12	Aug. 02, 2022	-	- 12 dimension updated, for size 1206, size 2010, size 2512.
Version 11	May 15, 2020	-	- Extend RC0201, RC0402, RC0603, RC0805, RC1206 D tol resistance range to Iohm
Version 10	Dec. 12, 2018	-	- Updated 0075 dimensions
Version 9	Mar. 06, 2018	-	- Add 0.5%/1% marking rule for RC0603 ~ RC2512 based on marking datasheet
Version 8	July 10, 2017	-	- Add "3W" part number coding for 13" Reel & double power
Version 7	Mar. 7, 2017	-	- Add 10" packing
Version 6	Feb.15, 2017	-	- Extend RC0805 and RC1206 resistance range to 100Mohm
Version 5	Oct. 06, 2016	-	- Description: Update Dimension of I2 of RC2512 (2W)
Version 4	Jan. 22, 2016	-	- Update resistance range
Version 3	Dec. 24, 2015	-	- Updated test and requirements
Version 2	Jul. 23, 2015	-	- Updated test and requirements
Version I	Jan. 21, 2015	-	- ESD Safe Reel update
Version 0	Dec. 15, 2014	-	- First issue of this specification

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